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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/538,839

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Junichi Hayashi

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FITZPATRICK CELLA HARPER & SCINTO  
30 ROCKEFELLER PLAZA  
NEW YORK, NY 10112

EXAMINER

SU, SARAH

ART UNIT

PAPER NUMBER

2131

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/538,839	<b>Applicant(s)</b> HAYASHI ET AL.	
	<b>Examiner</b> Sarah Su	<b>Art Unit</b> 2131	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 June 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☒ Claim(s) 5, 10, 13 and 16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 June 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/13/05, 1/12/07, 4/25/07</u> .                               | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. Claims 1-16 are presented for examination.

#### ***Priority***

2. The claim for priority from PCT/JP04/00619 filed on 23 January 2004 is duly noted.
3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

#### ***Specification***

4. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

#### ***Claim Objections***

5. Claims 5, 10, 13 and 16 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

- a. Claim 5 recites an information processing method for decrypting data that has been encrypted by the method of claim 3, which does not properly further limit claim 3.
  - b. Claim 10 recites a computer readable storage medium storing a computer program of claim 9, which does not properly further limit claim 9.
  - c. Claim 13 recites an information processing method for decrypting data that has been encrypted and encoded by the method of claim 11, which does not properly further limit claim 11.
  - d. Claim 16 recites a computer readable storage medium storing a computer program of claim 15, which does not properly further limit claim 15.
6. Claims 1-2, 5, 8-11, 13-16 are objected to because of the following informalities:
- a. In claim 1, line 3: “encoded image data” is unclear if it relates to “encoded image data” (claim 1, line 2);
  - b. In claim 1, line 8: “data indicates” should read –data and indicates–;
  - c. In claim 2, line 3: “encrypted data” is unclear if it relates to “encrypted encoded image data” (claim 1, line 10);
  - d. In claim 5, line 1: “An information processing method” is unclear if it relates to “An information processing method” (claim 1, line 1);
  - e. In claim 5, line 4: “encoded image data” is unclear if it relates to “encoded image data” (claim 1, line 2);
  - f. In claim 5, line 9: “encrypted data” is unclear if it relates to “encrypted encoded image data” (claim 1, line 10);

- g. In claim 8, line 3: "encoded image data" is unclear if it relates to "encoded image data" (claim 8, line 2);
- h. In claim 9, line 5: "encoded image data" is unclear if it relates to "encoded image data" (claim 9, lines 2-3);
- i. In claim 10, lines 1-2: "a computer program" is unclear if it relates to "A computer program" (claim 9, line 1);
- j. In claim 11, line 3: "encoded image data" is unclear if it relates to "encoded image data" (claim 11, line 2);
- k. In claim 13, line 1: "An information processing method" is unclear if it relates to "An information processing method" (claim 11, line 1);
- l. In claim 13, line 4: "encrypted encoded image data" is unclear if it relates to "encrypting the input encoded image data" (claim 11, lines 4-5);
- m. In claim 13, line 9: "encrypted data" is unclear if it relates to "encrypting the input encoded image data" (claim 13, lines 4-5);
- n. In claim 14, line 3: "encoded image data" is unclear if it relates to "encoded image data" (claim 14, line 2);
- o. In claim 15, line 5: "encoded image data" is unclear if it relates to "encoded image data" (claim 15, lines 2-3);
- p. In claim 16, lines 2-3: "a computer program" is unclear if it relates to "A computer program" (claim 15, line 10).

Appropriate correction is required.

***Drawings***

7. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: S151, S152, S153, S154 (Figure 15).

8. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because:

- a. reference characters "51", "161" and "181" have been used to designate CODE INPUT UNIT (Figures 5, 16 and 18);
- b. reference characters "52", "162" and "182" have been used to designate ENTROPY DECODING UNIT (Figures 5, 16 and 18).

Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claims 1-12, 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hogan (US Patent 6,047,069) and in view of Ogata (US Patent 6,553,073).

As to claims 1, 8 and 9, Hogan discloses a system and method for preserving error correction capabilities during data encryption/decryption, the system and method having:

**a step of inputting encoded image data** (col. 3, lines 23-26);

**a step of encrypting the input encoded image data** (col. 3, lines 39-40).

Hogan does not disclose:

**a step of changing presence/absence information, which is contained in header data of the encoded image data indicates presence/absence of an error-detecting code, to the absence of the error-detecting code, and outputting the encrypted encoded image data.**

Nonetheless, this feature is well known in the art and would have been an obvious modification of the teachings disclosed by Hogan, as evidenced by Ogata.

Ogata discloses a system and method for compressed moving picture transmission, the system and method having:

**a step of changing presence/absence information, which is contained in header data of the encoded image data indicates presence/absence of an error-detecting code, to the absence of the error-detecting code, and outputting the encrypted encoded image data (col. 14, lines 41-45; col. 16, lines 18-21, 53-54, 59-60).**

Given the teaching of Ogata, a person having ordinary skill in the art at the time of the invention would have readily recognized the desirability and advantages of modifying the teachings of Hogan with the teachings of Ogata by indicating a lack of error-detecting code and outputting image data. Ogata recites motivation by disclosing that a flag indicates the existence of CRC in order to be able to confirm the validity of the data if available (col. 15, lines 1-3). It is obvious that the teachings of Hogan would have benefited from the teachings of Ogata by indicating if error-detecting code is available in order to be able to use the code to validate the data.



As to claim 2, Hogan discloses:

**comprising a step of outputting decryption key information required to decrypt encrypted data (col. 3, lines 40-43).**

As to claim 3, Hogan does not disclose:

**a step of saving the presence/absence information in the input encoded image data at another location in the header data.**

Nonetheless, this feature is well known in the art and would have been an obvious modification of the teachings disclosed by Hogan, as evidenced by Ogata.

Ogata discloses:

**a step of saving the presence/absence information in the input encoded image data at another location in the header data (col. 2, lines 51-54).**

Given the teaching of Ogata, a person having ordinary skill in the art at the time of the invention would have readily recognized the desirability and advantages of modifying the teachings of Hogan with the teachings of Ogata by storing the information in another location. Ogata recites motivation by disclosing that the information is added according to a reference signal to allow for block synchronizing (col. 2, lines 20-24). It is obvious that the teachings of Ogata would have improved the teachings of Hogan by saving information in a different location in order to allow for block synchronizing through use of a reference signal.

As to claim 4, Hogan does not disclose:

**wherein the saving step includes a step of saving the  
presence/absence information in the header data as a comment.**

Nonetheless, this feature is well known in the art and would have been an obvious modification of the teachings disclosed by Hogan, as evidenced by Ogata.

Ogata discloses:

**wherein the saving step includes a step of saving the  
presence/absence information in the header data as a comment** (col. 2, lines 51-54. The examiner asserts that it is obvious to one of ordinary skill in the art that comments can be placed in header data.

Given the teaching of Ogata, a person having ordinary skill in the art at the time of the invention would have readily recognized the desirability and advantages of modifying the teachings of Hogan with the teachings of Ogata by saving information as a header comment. Please refer to motivation recited above in respect to claim 3 as to why it is obvious to apply the teachings of Ogata to the teachings of Hogan.

As to claim 5, Hogan discloses:

**a step of inputting encoded image data** (col. 3, lines 23-26);  
**a first checking step of checking whether or not the saved  
presence/absence information indicates the presence of the error-detecting  
code** (i.e. ECC code) (col. 4, lines 1-3, 11-15);

**a second checking step of checking whether or not key information (i.e. encryption key) required to decrypt encrypted data is available (col. 4, lines 8-15);**

**a step of changing, when it is determined in the first and second checking steps that the error-detecting code is present and the decryption key information is available (col. 4, lines 8-15), the presence/absence information contained in the header data to the presence of the error-detecting code (col. 4, lines 30-33, 39-42), decrypting the encrypted data (col. 5, lines 24-26), and passing the decrypted data to an encoded image data decoding process (i.e. MPEG decoder) (col. 5, lines 13-15).**

As to claim 6, Hogan discloses:

**wherein when it is determined in the first and second checking steps that the error-detecting code is absent and the decryption key information is available, the encrypted data is decrypted without changing the presence/absence information in the header data (col. 6, lines 7-10).**

As to claim 7, Hogan does not disclose:

**wherein when it is determined in the first and second checking steps that the decryption key information is not available, the input encoded image data is directly passed to the encoded image data decoding process.**

Nonetheless, this feature is well known in the art and would have been an obvious modification of the teachings disclosed by Hogan, as evidenced by Ogata.

Ogata discloses:

**wherein when it is determined in the first and second checking steps that the decryption key information is not available, the input encoded image data is directly passed to the encoded image data decoding process (i.e. decoder) (col. 17, lines 21-25).**

Given the teaching of Ogata, a person having ordinary skill in the art at the time of the invention would have readily recognized the desirability and advantages of modifying the teachings of Hogan with the teachings of Ogata by decoding data when decryption information is not provided. Ogata recites motivation by disclosing that a decoder is used to restore the original digital data from unencrypted data (col. 17, lines 25-26). It is obvious that the teachings of Ogata would have improved the teachings of Hogan by decoding unencrypted data in order to restore original data.

As to claims 11, 14 and 15, Hogan discloses:

**a step of inputting encoded image data (col. 3, lines 23-26);**  
**a step of decoding and encrypting the input encoded image data (col. 3, lines 39-43; col. 5, lines 26-29);**  
**a step of checking presence/absence information which is contained in header data of the input encoded image data and indicates presence/absence of an error-detecting code (col. 4, lines 1-3, 11-15).**

Hogan does not disclose:

**a re-encoding control step of re-encoding, when it is determined in the checking step that the error-detecting code is absent, the encrypted image data, and appending, when it is determined in the checking step that the error-detecting code is present, a segmentation symbol indicating the presence of the error-detecting code to the image data encrypted in the encryption step, and re-encoding the encrypted image data appended with the segmentation symbol.**

Nonetheless, this feature is well known in the art and would have been an obvious modification of the teachings disclosed by Hogan, as evidenced by Ogata.

Ogata discloses:

**a re-encoding control step of re-encoding, when it is determined in the checking step that the error-detecting code is absent, the encrypted image data (col. 14, lines 44-45; col. 16, lines 3-7), and appending, when it is determined in the checking step that the error-detecting code is present, a segmentation symbol (i.e. CRC) indicating the presence of the error-detecting code to the image data encrypted in the encryption step, and re-encoding the encrypted image data appended with the segmentation symbol (col. 15, lines 42-43; col. 16, lines 3-7).**

Given the teaching of Ogata, a person having ordinary skill in the art at the time of the invention would have readily recognized the desirability and advantages of modifying the teachings of Hogan with the teachings of Ogata by encoding data that indicates if

error detecting code is present. Ogata recites motivation by disclosing that encoding data by inserting a header with or without CRC generates data of the format of the SDDI scheme (col. 16, lines 6-7). It is obvious that Ogata would have improved the teachings of Hogan by encoding data with an indication of the presence/absence of error-detecting code in order to put the data in a particular format.

As to claims 10 and 16, Hogan discloses:

**A computer readable storage medium storing a computer program of claim 9 (703, Figure 7).**

As to claim 12, Hogan does not disclose:

**wherein the decoding step includes a step of performing entropy decoding, and the re-encoding control step includes a step of performing entropy encoding.**

Nonetheless, this feature is well known in the art and would have been an obvious modification of the teachings disclosed by Hogan, as evidenced by Ogata.

Ogata discloses:

**wherein the decoding step includes a step of performing entropy decoding (i.e. Huffman coding) (col. 25, lines 21-29), and the re-encoding control step includes a step of performing entropy encoding (col. 16, lines 61-67; col. 17, line 1).**

Art Unit: 2131

Given the teaching of Ogata, a person having ordinary skill in the art at the time of the invention would have readily recognized the desirability and advantages of modifying the teachings of Hogan with the teachings of Ogata by using entropy encoding and decoding. Ogata recites motivation by disclosing that Huffman coding is used in a variable length coding circuit in order to compress data and reduce bit rate (col. 16, lines 61, 66-67) for lossless compression. It is obvious that the teachings of Ogata would have improved the teachings of Hogan by using entropy encoding and decoding in order to compress data without loss. The examiner asserts that it is well known in the art that Huffman coding is an entropy encoding algorithm.

12. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hogan in view of Ogata as applied to claim 11 above, and further in view of Lyle (US Patent 7,035,290 B1).

As to claim 13, Hogan, combined with Ogata, discloses:

**a step of inputting encrypted encoded image data** (col. 3, lines 23-26);

**a step of decoding the encoded image data input in the input step**

(col. 3, lines 39-43; col. 5, lines 26-29).

Hogan does not disclose:

**an encoding step of decrypting the encrypted image data on the**

**basis of key information required to decrypt encrypted data, and re-**

**encoding the decrypted data;**

**a step of outputting the re-encoded data to a low-order encoded image data decoding process.**

Nonetheless, these features are well known in the art and would have been an obvious modification of the teachings disclosed by Hogan in view of Ogata, as evidenced by Lyle.

Lyle discloses a system and method for temporary interruption of video data transmission, the system and method having:

**an encoding step of decrypting the encrypted image data on the basis of key information required to decrypt encrypted data, and re-encoding the decrypted data** (col. 16, lines 10-12; col. 17, lines 45-46);

**a step of outputting the re-encoded data to a low-order encoded image data decoding process** (col. 17, lines 46-47).

Given the teaching of Lyle, a person having ordinary skill in the art at the time of the invention would have readily recognized the desirability and advantages of modifying the teachings of Hogan in view of Ogata with the teachings of Lyle by outputting data that has been decrypted and re-encoded. Lyle recites motivation by disclosing that encrypting and decrypting may not be able to resume synchronous operation until re-synchronization is performed (i.e. encoding) (col. 6, lines 65-67; col. 7, line 1). It is obvious that the teachings of Lyle would have improved the teachings of Hogan in view of Ogata by outputting data that has been decrypted and re-encoded in order to allow for security from encryption/decryption while maintaining synchronous operation.



***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sarah Su whose telephone number is (571) 270-3835. The examiner can normally be reached on Monday through Friday 7:30AM-5:00PM EST..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (571) 272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sarah Su/  
Examiner, Art Unit 2131

/Ayaz R. Sheikh/

Supervisory Patent Examiner, Art Unit 2131